REMARKS

I. PRELIMINARY REMARKS

Claims 30, 31, 33, 34, 38, 39, 40, 43, 44, 46, 47 and 49 have been amended. Claims 50-69 have been added. Claims 32 and 45 have been canceled. Claims 30, 31, 33-44 and 46-69 remain in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

II. FORMALISTIC ISSUES

The abstract has been objected to. Applicant respectfully submits that the objection has been obviated by the amendments above.

The drawings have been objected. The Office Action indicated that the drawings do not include reference numerals 92, 138 and 240, which are mentioned in the description, and do include reference numeral 40, which is not mentioned in the description. The objection is respectfully traversed with respect to reference numeral 138, which is shown in Figure 12. With respect to reference numerals 40, 92 and 240, applicant respectfully submits that the objection has been obviated by the amendments above to the specification and should be withdrawn.

Claims 33 and 47 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully submits that the minor typographical errors identified in the Office Action have been obviated by the amendments above and that the rejection under 35 U.S.C. § 112 should be withdrawn.

III. PRIOR ART REJECTIONS

A. The Rejections

Claims 30, 31 and 34 have been rejected under 35 U.S.C. § 102 as being anticipated by the Peacock patent (U.S. Patent No. 6,059,770). Claims 30-39 have been rejected under 35 U.S.C. § 102 as being anticipated by the Webster patent (U.S. Patent No. 5,827,278). Claims 40, 41, 45 and 47 have been rejected under 35 U.S.C. § 102 as being anticipated by the Berenstein patent (U.S. Patent No. 5,895,378). Claims 40-42 have been rejected under 35 U.S.C. § 102 as being anticipated by the Fleming patent (U.S. Patent No. 5,718,678). Claims 44, 48 and 49 have been rejected under 35 U.S.C. § 103 as being unpatentable over the combined teachings of the Berenstein and Webster patents.

As claims 32 and 45 have been canceled, it is respectfully submitted that the rejections thereof under 35 U.S.C. § 102 have been rendered moot. The rejections of the remaining claims under 35 U.S.C. §§ 102 and 103 are respectfully traversed with respect to the claims as amended above. Reconsideration thereof is respectfully requested.

B. Claims 30, 31 and 33-39

Independent claim 30 calls for a combination of elements including, *inter alia*, "a hollow catheter body having a side wall and an aperture," "a steering center support located within the catheter body" and "adhesive material ... securing the hollow catheter body to the steering center support." The cited references fail to teach or suggest such a combination.

1. The Webster Patent

The Webster patent disclose a device including a catheter body 11, a tip section 12 that is secured to the catheter body, and a puller wire 30 that is used to deflect the tip

section. Referring to Figure 4, the puller wire 30 may be secured to the tip section 12 with glue 47.

The Office Action has apparently taken the position that the Webster puller wire 30 is a "steering center support." This position is respectfully traversed. As discussed in *In re Cortright*, 49 USPQ2d 1464, 1467 (Fed. Cir. 1999), claims in an application are to be given their broadest reasonable interpretation. This interpretation must be "consistent with the specification" and "consistent with the one that those skilled in the art would reach." *Id.* Here, the present specification makes it perfectly clear that a steering wire (such as the Webster puller wire 30) and a steering center support are two complete different things. [See, for example, page 2, lines 1-12, Figure 36, and page 22, line 26 to page 23, line 12.] As such, the Webster patent simply does not teach or suggest a combination of elements including a "catheter body," "a steering center support," and "adhesive material ... securing the hollow catheter body to the steering center support," as is called for in independent claim 30.

As the Webster patent fails to teach or suggest each and every element of the combination recited in independent claim 30, applicant respectfully submits that claims 30, 31 and 33-39 are patentable thereover and that the rejection under 35 U.S.C. § 102 should be withdrawn.

2. The Peacock Patent

The Peacock patent fails to teach or suggest the use of a "steering center support" and, accordingly, cannot anticipate a combination of elements including "catheter body," "a steering center support," and "adhesive material ... securing the hollow catheter body to the steering center support," as is called for in independent claim 30. Applicant respectfully submits, therefore, that claims 30, 31 and 34 are patentable thereover and that the rejection under 35 U.S.C. § 102 should be withdrawn.

C. Claims 40-42, 44 and 47-49

Independent claim 40 calls for a combination of elements including, *inter alia*, "a hollow catheter body proximal member," "a hollow catheter body distal member ... the distal and proximal members being respectively located such that one of the distal region of the proximal member and the proximal region of the distal member overlaps the other, thereby creating an overlapping region," "a bond at the overlapping region securing the proximal member to the distal member" and "a steering center support located within at least the distal member and secured to at least one of the proximal member and the distal member." The cited references fail to teach or suggest such a combination.

1. The Berenstein Patent

The Berenstein patent discloses an infusion catheter 100 which includes a plurality of segments/sections 108, 110, 111 and 112 that are connected by tapering joints 114, 115 and 116. The Berenstein patent also discloses the use of a stylet 120 which is placed within the interior of the catheter 100 when the catheter is being advanced into the vasculature. [Column 4, lines 36-45.] The catheter 100 may also be used in conjunction with a guidewire that is advanced into the vasculature ahead of the catheter. [Column 1, lines 31-39 and column 4, lines 46-52.]

The Office Action has apparently taken the position that the Berenstein stylet 120 a "steering center support." This position is respectfully traversed. The Berenstein stylet 120 is clearly not a "steering center support," as this term is used in the present application.[1] The Berenstein stylet 120 is also not secured to a portion of the catheter 100, as called for in the combination defined by independent claim 40.

As the Berenstein patent fails to teach or suggest each and every element of the combination recited in independent claim 40, applicant respectfully submits that claims

40, 41 and 47 are patentable thereover and that the rejection under 35 U.S.C. § 102 should be withdrawn.

2. The Berenstein/Webster Combination

Applicant respectfully submits that the Webster patent, which has been cited with respect to dependent claims 44, 48 and 49, fails to remedy the aforementioned deficiencies in the Berenstein patent. As such, claims 44, 48 and 49 are patentable for at least the same reasons as independent claim 40 and the rejection of claims 44, 48 and 49 under 35 U.S.C. § 103 should also be withdrawn.

3. The Fleming Patent

The Fleming patent fails to teach or suggest the use of a "steering center support" and, accordingly, cannot anticipate a combination of elements including "a hollow catheter body proximal member," "a hollow catheter body distal member" and "a steering center support located within at least the distal member and secured to at least one of the proximal member and the distal member," as is called for in independent claim 40. Applicant respectfully submits, therefore, that claims 40-42 are patentable thereover and that the rejection under 35 U.S.C. § 102 should be withdrawn.

IV. NEWLY PRESENTED CLAIMS 50-69

Newly presented claims 50 and 51 depend from independent claim 30 and, accordingly, are patentable for at least the same reasons as claim 30.

Newly presented independent claim 52 calls for a combination of elements comprising "a hollow catheter body including proximal member defining a distal region and a distal member defining a distal end, at least one of the proximal and distal

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[1] As noted above, claims in an application must be interpreted in a manner that is "consistent with the specification" and "consistent with the one that those skilled in the

members having a side wall and an aperture extending through a predetermined portion of the side wall," "a tip member carried by the distal end of the distal member," "at least one internal component located within the catheter body and secured to the tip member" and "adhesive material located within the hollow catheter body such that at least a portion of the adhesive material is in the vicinity of the side wall aperture, the adhesive material securing the proximal member distal region to the at least one internal component." Applicant respectfully submits that the cited references fail to teach or suggest such a combination and that claims 52-59 are patentable thereover.

Newly presented independent claim 60 calls for a combination of elements comprising "a hollow catheter body including a proximal member defining an inner diameter, an outer diameter, and a distal region, and a distal member defining an inner diameter that is substantially the same as the proximal member inner diameter, an outer diameter that is substantially the same as the proximal member outer diameter, and a proximal region, one of the proximal member distal region and the distal member proximal region including a small portion that overlaps the other of the proximal member distal region and the distal member proximal region, thereby defining an overlapping region," "a bond at the overlapping region securing the proximal member to the distal member" and "at least one internal component located within at least the distal member." Applicant respectfully submits that the cited references fail to teach or suggest such a combination and that claims 60-69 are patentable thereover.

V. REQUEST FOR CORRECTION OF INVENTORSHIP UNDER 37 C.F.R. § 1.48(b)

The correct inventors were originally named in the present application. In view of the previous amendments canceling claims 1-29, co-inventors Russell B. Thompson, Sidney D. Fleischman, James G. Whayne, David K. Swanson are no longer inventors of the inventions being claimed in the application. Applicant hereby requests that the application be amended such that original co-inventors Russell B. Thompson, Sidney D.

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art would reach." *In re Cortright*, 49 USPQ2d at 1467.

Fleischman, James G. Whayne, David K. Swanson are deleted. A check in the amount of $130 is enclosed herewith in accordance 37 C.F.R 1.17(i).

VI. CLOSING REMARKS

In view of the foregoing, it is respectfully submitted that the claims in the application are in condition for allowance. Reexamination and reconsideration of the application, as amended, are respectfully requested. Allowance of the claims at an early date is courteously solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is respectfully requested to call applicant's undersigned representative at (310) 563-1458 to discuss the steps necessary for placing the application in condition for allowance.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-0638. Should such fees be associated with an extension of time, applicant respectfully requests that this paper be considered a petition therefor.

Respectfully submitted,

6/11/03
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VERSION OF AMENDMENTS WITH MARKINGS TO SHOW CHANGES MADE

The abstract has been amended as follows:

A catheter, having improved steering and torque transmission capabilities, may include adhesive that secures the catheter body to an internal component and/or an overlapping bond that secures a proximal portion of the catheter body to the distal portion.

The paragraph on page 9, line 31 to page 10, line 9 has been amended as follows:

To provide an understanding of the technology relevant to this disclosure, a prior art catheter distal end assembly 60 is illustrated in FIG. 2. The distal end assembly 60 includes a hollow tubular body portion 64 having a plurality of ablation electrodes 68 disposed along its length. A tip member 72 is located at the distal end 76 of the tubular member 64. A thin flat steering center support 80 is disposed within the central lumen 84 of the tubular member 64. The tip member 72 is fixedly engaged to the distal end 88 of the center support 80. Two steering wires 90 [and 92] are bonded to opposite sides of the center support 80 at a location P at the distal end 88 of the center support 80, immediately behind the tip member 72 (only one steering wire 90 is [shown] visible in this view).

The paragraph on page 15, line 31 to page 16, line 21 has been amended as follows:

Referring first to FIGS. 13 and 14, which show a prior art butt bond joint assembly [240] 40, the main body tube 18 is generally formed of a braided material for strength, pushability and efficient torque transfer throughout its length. A tubular steering mechanism guide coil 244 is disposed within the central lumen 246 of the main

body tube 18 and a steering ferrule 248 is engaged to the distal end 250 of the guide coil. The steering ferrule 248 is formed with a steering wire bore 254 therethrough so that steering wires 258 disposed within the guide coil 244 project through the bore towards the distal end of the assembly 22. A flat steering center support 260 is disposed within a slot 262 that is formed through the distal portion of the ferrule 248. An insulating shrink tube 264 is formed around the steering mechanism which includes the distal portion of the guide coil 244, the ferrule 248, steering center support 260 and steering wires 258. Other components, such as bundled electrode wires 266 and temperature sensor wires 268, may also be disposed within the lumen 246. The proximal end 26 of the distal end tube 24 is adhesively butt bonded (note reference numeral 32) to the distal end 28 of the main body tube 18. To provide strength to the butt bond 32, a tubular butt bond sleeve 274 is disposed within the butt bond joint assembly [240] 40, and both the distal end 28 of the main body tube 18 and the proximal end 26 of the distal end tube 24 are adhesively bonded to the butt bond sleeve 274 in addition to being butt bonded to one another. A quantity of adhesive material 280 is also inserted into the butt bond sleeve 274 to bond the steering mechanism sleeve 264 within the butt bond sleeve 274.

The paragraph on page 16, lines 22-29 has been amended as follows:

When the main body tube 18 is rotated, it is desirable that the torque be communicated to the distal end assembly 22. To achieve this, the torque at the distal end 28 of the main body tube 18 is transferred to the distal end assembly 22 through the butt bond joint [240] 40, primarily from the butt bonding sleeve 274, to the steering center support 260 through the adhesive material 280 within the butt bond sleeve 274. Torque forces are also transferred from the main body tube 18, through the butt bond 32 to the proximal end 26 of the distal end tube 24.

Claims 30, 31, 33, 34, 38, 39, 40, 43, 44, 46, 47 and 49 been amended as follows:

30. (Amended) A catheter, comprising:

a hollow catheter body having a side wall and an aperture extending through a predetermined portion of the side wall;

[at least one internal component] a steering center support located within the catheter body; and

adhesive material located within the hollow catheter body such that at least a portion of the adhesive material is in the vicinity of the side wall aperture, the adhesive material securing the hollow catheter body to the [at least one internal component] steering center support.

31. (Amended) A catheter as claimed in claim 30, [wherein the at least one internal component comprises] further comprising:

a guide coil secured to the hollow catheter body by the adhesive material.

33. (Amended) A catheter as claimed in claim 30, [wherein the at least one internal component comprises] further comprising:

a sleeve covering at least a portion of the steering center support.

34. (Amended) A catheter as claimed in claim 30, wherein the steering center support defines a periphery and the adhesive material extends around the periphery of the [internal component] steering center support.

38. (Amended) A catheter as claimed in claim 37, wherein the at least one energy transmission element comprises a tip energy transmission element, and the [at least one internal component] steering center support is connected to the tip energy transmission element.

39. (Amended) A catheter as claimed in claim 30, further comprising:

a torque transfer device located within at least a portion of the adhesive material and adapted to engage at least a portion of the [at least one internal component] steering center support and transfer torque to the [at least one internal component] steering center support.

40. (Amended) A catheter, comprising:

a hollow catheter body proximal member defining a distal region;

a hollow catheter body distal member defining a proximal region, the distal and proximal members being respectively located such that one of the distal region of the proximal member and the proximal region of the distal member overlaps the other, thereby creating an overlapping region;

a bond at the overlapping region securing the proximal member to the distal member; and

[at least one internal component] a steering center support located within at least the distal member and secured to at least one of the proximal member and the distal member.

43. (Amended) A catheter [as claimed in claim 42] , [further] comprising:

a hollow catheter body proximal member defining a distal region and including a side wall having an aperture formed therein;

a hollow catheter body distal member defining a proximal region, the distal and proximal members being respectively located such that one of the distal region of the proximal member and the proximal region of the distal member overlaps the other, thereby creating an overlapping region;

a bond at the overlapping region securing the proximal member to the distal member;

at least one internal component located within at least the distal member; and

adhesive material connecting the proximal member to the at least one internal component, at least a portion of the adhesive material being in the vicinity of the side wall aperture.

44. (Amended) A catheter as claimed in claim 40, [wherein the at least one internal component comprises] further comprising:

a guide coil.

46. (Amended) A catheter [as claimed in claim 45, wherein the at least one internal component comprises] , comprising:

a hollow catheter body proximal member defining a distal region;

a hollow catheter body distal member defining a proximal region, the distal and proximal members being respectively located such that one of the distal region of the proximal member and the proximal region of the distal member overlaps the other, thereby creating an overlapping region;

a bond at the overlapping region securing the proximal member to the distal member; and

a steering center support and a sleeve covering at least a portion of the steering center support located within at least the distal member.

47. (Amended) A catheter as claimed in claim 40, wherein [the] adhesive extends around the periphery of the [internal component] steering center support.

49. (Amended) A catheter as claimed in claim 48, wherein the at least one energy transmission element comprises a tip energy transmission element, and the [at least one internal component] steering center support is connected to the tip energy transmission element.